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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/827,090

04/19/2004

Steven P. Nolle

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ARRIS INTERNATIONAL, INC  
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EXAMINER

REDDIVALAM, SRINIVASA R

ART UNIT

PAPER NUMBER

2619

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DELIVERY MODE

03/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/827,090	<b>Applicant(s)</b> NOLLE ET AL.	
	<b>Examiner</b> SRINIVASA R. REDDIVALAM	<b>Art Unit</b> 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,8 and 10 is/are rejected.
- 7) ☒ Claim(s) 2,4,7 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a **single paragraph** on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5, 6, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Carlson et al. (US Pub. No: 2006/0120282 A1)

**Regarding claim 1**, Carlson et al. teach a method for balancing upstream traffic of a subscriber device in a broadband communication network over a plurality of upstream channels (see page 3, para [0024], lines 7-10), comprising: performing static

load balancing when the subscriber device requests an upstream channel (see page 3, para [0028] wherein a load balancer making channel assignments such that a plurality users are each assigned a respective channel of the shared medium is mentioned); and performing predictive load balancing between upstream channels based on the number of subscriber devices configured with a media terminal adaptor such that the upstream channel assignment of user devices having an MTA is spread across the upstream channels (see page 3, para [0026] wherein a load balancer operative for allocating users between channels of the shared medium based on a predicted need is mentioned and also load balancer changing the channel of communications of a selected user i.e. user having an MTA to a channel having lighter load is mentioned. Also, see Fig.32 and page 18, paragraphs [0210-0211] wherein predictive load balancing and cable modem with streaming video data service flow are mentioned).

**Regarding claim 5**, Carlson et al. teach the method wherein the subscriber device is a cable modem (see page 5, para [0066], lines 1-6 wherein a CM representing a user is mentioned).

**Regarding claim 6**, Carlson et al. teach a method for performing static load balancing of one of a plurality of subscriber devices in a broadband communication network over a plurality of upstream channels (see page 3, para [0028], lines 1-4), comprising: assigning the one subscriber device to an upstream channel based on the number of subscriber devices assigned to communicate over each of the upstream channels (see page 3, para [0028] wherein a load balancer making channel assignments such that a plurality users are each assigned a respective channel of the

shared medium is mentioned) wherein the cumulative bandwidth of the subscriber devices assigned to a channel is compared to a predetermined CAC threshold level for said channel (see page 6, para [0075] wherein predetermined upstream bandwidth limit by the carrier/other appropriate entity is mentioned and see para [0076] wherein CMTS monitoring the cumulative bandwidth of the users w.r.t. upstream bandwidth limit is mentioned).

**Regarding claim 10**, Carlson et al. teach the method wherein the subscriber device is a cable modem (see page 5, para [0066], lines 1-6 wherein a CM representing a user is mentioned).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson et al. (US Pub. No: 2006/0120282 A1) in view of Chapman (US Patent No: 7,085,287 B1).

**Regarding claims 3 and 8**, Carlson et al. do not teach specifically the method wherein an upstream channel override change message is sent to the requesting device to cause said device to be assigned to a channel other than the channel being requested.

However, Chapman teaches the method wherein an upstream channel override change message is sent to the requesting device to cause said device to be assigned to a channel other than the channel being requested (see col.20, lines 32-49 wherein CMTS sending dynamic service request reply via dynamic channel change command to include a new upstream channel to be used by CM is mentioned).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Carlson et al. to include sending upstream channel override change message to the requesting device to cause said device to be assigned to a channel other than the channel being requested, disclosed by Chapman for proper load balancing of the upstream channels in the system.

***Allowable Subject Matter***

7. Claims 2, 4, 7, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

8. Applicant's remarks/arguments filed on 02/04/2008 have been fully considered but they are not persuasive. As per the restriction requirement, the claims fall into 3 groups as mentioned in the previous office action which are independent and patentably distinct from one another because these 3 groups of claims are 3 different ways of determining/predicting the upstream channel as shown in figures 2, 3, and 4 of specification respectively and they fall under different sub-classes as mentioned in the previous office action. This requires 3 different searches as these groups of claims belong to 3 different areas and hence the restriction is required.

***Conclusion***

9. Any response to this office action should be faxed to (571) 273-8300 or mailed  
To:

Commissioner for Patents,  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses should be brought to**

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRINIVASA R. REDDIVALAM whose telephone number is (571)270-3524. The examiner can normally be reached on Mon-Fri 9:30 AM - 7 PM (1st Friday OFF).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on 571-272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2619